What can I do with a major in Engineering?

Lewis-Clark State College offers an opportunity to enroll in a complete set of foundational engineering courses ready for transfer to any other accredited institution to complete your Bachelor’s degree in Engineering through the Natural Sciences and Mathematics Division. You can learn more about the Natural Sciences and Mathematics Division and enrolling in coursework for an Engineering program by visiting their [webpage](#) or the LCSC [catalog](#).

» Click below for specific areas you are interested in:

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**General Information:**

- Bachelor's degree provides wide range of career opportunities in industry, business, and government.
- Graduate degrees offer more opportunities for career advancement.
- Bachelor's degree is good background for pursuing technical graduate degrees as well as professional degrees in Business Administration, Medicine or Law.
- Related work experience obtained through co-op, internships, part-time or summer jobs, or regular employment is extremely beneficial.
- Develop computer expertise within field.
- Engineers need to think in scientific and mathematical terms, have ability to study data, sort out important facts, solve problems, and be logical thinkers. Creativity is useful.
- Other helpful traits include intellectual curiosity, technical aptitude, perseverance, ability to communicate and work well with others, a commitment to teamwork, and a basic understanding of the economic and environmental context in which engineering is practiced.
- Develop excellent verbal and written communications skills including presentation and technical report writing.
What can I do with a major in Engineering?

- All states and the District of Columbia require registration of engineers whose work may affect the life, health, or safety of the public.

- Professional or technical societies confer certification in some areas.

- Join related professional organizations.

- Most fields offer overseas opportunities with businesses or government agencies.

- Because of rapid changes in most engineering fields, both continued education and keeping abreast of new developments are very important.

- Most states require an EIT (Engineer-In-Training) test before taking a state examination to become a Professional Engineer (PE).

- Search the Internet for additional information about individual disciplines

Any Engineering Discipline

Production
Sales and Marketing
Management
Consulting
Research and Development
Teaching
Law

EMPLOYERS

Industry
Business
Federal, state, and local government
Colleges and universities

STRATEGIES

Obtain engineering related experience through a co-op or internship in business/industry. MBA degree provides best opportunities in technical management. Obtain Ph.D. for optimal teaching and research careers. Develop strong verbal and written communication skills. Learn federal, state, and local government job application procedures.
What can I do with a major in Engineering?

**Aerospace**
- Propulsion
- Fluid Mechanics
- Thermodynamics
- Structures
- Celestial Mechanics
- Acoustics
- Guidance and Control

**EMPLOYERS**
- Aircraft, guided missile, and space vehicle industries
- Communications equipment manufacturers
- Commercial airlines
- Federal government departments: Defense, National Aeronautics and Space Administration (NASA)
- Business and engineering firms

**STRATEGIES**

Discipline uses cutting edge technology to deal with challenges of aeronautics, space, mass transportation, environmental pollution, and medical science. Keep abreast of status of federal funding for defense and space programs. Seek co-op opportunities. Develop effective verbal and written communication skills. Learn to work well within a team.

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What can I do with a major in Engineering?

**Bio systems Engineering**
Natural Resources: Soil and Water Conservation  
International Consulting  
Environmental Control  
Agricultural Structures  
Power and Machinery  
Electronic Systems  
Food Engineering  
Genetic Engineering  
Engineering Technology

**EMPLOYERS**
Technological agricultural industries  
Land grant universities: Experimental farm stations, Research laboratories  
Consulting firms  
Equipment design, testing, and manufacturing firms  
Equipment and food industries including processing, packaging, and storing  
Quality control for food, feed, fiber, etc.  
Biotechnology research firms  
Foreign Service

**STRATEGIES**
A broad, basic engineering discipline with a close relationship to the environment, food production, and agricultural productivity.

Participate in internship or co-op programs. Acquire strong computer skills.  
Learn a foreign language for work in foreign service. Develop strong math and problem solving skills.

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What can I do with a major in Engineering?

Biomedical
Bioengineering: Design, Development, Manufacturing
Medical Engineering: Instrumentation, Materials, Diagnostic/Therapeutic Devices, Artificial Organs, Medical Equipment
Rehabilitation Engineering
Bio-environmental Engineering

EMPLOYERS
Manufacturers of medical and surgical devices
Hospitals and healthcare facilities
Federal government: Regulatory agencies, Veteran's Administration, National Institutes of Health, National Aeronautics and Space Administration (NASA)
Industry
Research facilities of educational and medical institutions

STRATEGIES
Discipline combines engineering and human anatomy to develop and maintain medical and healthcare systems and equipment. Develop strong team work skills. Many positions require a graduate or professional degree. This field serves as a good background for medical school.

Chemical
Administration
Environmental and Waste Management: Development, Design

EMPLOYERS
Independent research institutes
Consulting organizations
Chemical industry including: Agricultural chemicals, Plastics, Industrial chemicals, Petroleum, Pharmaceutical, Cosmetic, Food processing, Atomic energy development, Environmental
Federal government including: Department of Energy, Environmental Protection Agency
Manufacturing plants including automotive, airplane, paper, microelectronics, textiles, metals, rubber, food, and beverage

STRATEGIES
This branch of engineering combines the science of chemistry with the discipline of engineering to solve problems and develop efficiency.

Develop exceptional interpersonal skills. Acquire technical work experience during college years.
What can I do with a major in Engineering?

**Civil**
- Structural
- Urban and Community Planning
- Construction
- Environmental
- Water Resources
- Transportation and Pipeline
- Geotechnical
- Photogrammetry, Surveying and Mapping
- Materials

**EMPLOYERS**
- Construction industry
- Engineering or architectural firms
- Utility companies
- Oil companies
- Telecommunications businesses
- Manufacturing companies
- Consulting firms
- Railroads
- State and federal government agencies

**STRATEGIES**
Broad discipline of "doers" providing service to the community through development and improvement. Works extensively with other professionals involved with the community. Provides opportunity to work outdoors.

Learn to work well within a team. Develop strong communication and interpersonal skills. Develop physical stamina for outdoor work. Get experience in organizing and directing workers and materials. Ability to visualize objects in three dimensions is helpful. Demand has remained steady due to broad nature of discipline. States may require licensing or registration.
What can I do with a major in Engineering?

Electrical/Computer
Power Electronics
Power Systems
Communications
Electronics
Control Systems
Digital Signal Processing
Microelectronics
Image Processing & Robotics
Computer Engineering
Plasma Engineering
Computer Vision

EMPLOYERS
Manufacturing firms and industry including: Aeronautical/Aerospace, Automotive, Business machines, Professional and scientific equipment, Consumer products, Chemical and petrochemical, Computers, Construction, Defense, Electric utilities, Electronics, Environmental, Food and beverage, Glass, ceramics, and metals, Machine tools, Mining and metallurgy, Nuclear, Oceanography, Pulp and paper, Textiles, Transportation, Water and wastewater
Public utilities
Federal government including: Armed forces, National Aeronautics and Space Administration (NASA), National Institutes of Health, Bureau of Standards, Department of Defense, Various commissions
Consulting firms
Free-lance consulting

STRATEGIES
A field in touch with a wide and growing range of applications such as high speed and wireless communication, exploration of outer space, and a revolution in medical diagnosis and treatment.

Develop effective verbal and written communication skills. Gain experience in team work. Acquire capacity for details. Develop interpersonal skills. Obtain research experience.

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What can I do with a major in Engineering?

**Industrial**
Operations Research
Applied Behavioral Science Systems
Manufacturing Management
Information Engineering
Computer Systems Design and Development

**EMPLOYERS**
Manufacturing industries
Accounting firms
Retail distribution organizations
Banks and financial institutions
Hospitals and healthcare organizations
Educational and public service agencies
Transportation industries
Construction industries
Public utilities
Electrical and electronics machinery industries
Consulting firms

**STRATEGIES**
Discipline links management and operations by improving productivity through a "big picture" approach; serves human needs and works with people.

Take courses in psychology, sociology and anthropology to learn more about people and how they behave. Earn an MBA for advancement in management or administration.

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What can I do with a major in Engineering?

**Mechanical**
Mechanical Power Generation: Internal Combustion Engines, Jet Engines, Steam Power Plants, Rockets, Energy Utilization and Conservation
Thermal/Fluids: Thermodynamics, Environmental Control, Refrigeration, Instrumentation and Control
Machine Sciences: Mechanical Design, Manufacturing and Production, Robotics, Operation and Maintenance

**EMPLOYERS**
Transportation: Automotive industry, aerospace industry, military laboratories
Utilities: Steam driven electric power stations
Equipment Design: Plants, Nuclear power stations
Electronics industry
Petro-Chemical: Drilling & production, plant operations
Manufacturing: Consumer products, chemical products, farm equipment, industrial equipment, paper and wood products, textile equipment
Consulting engineering firms

**STRATEGIES**
Takes broad outlook on solving complex problems. Involves design, development and production. Keeps pace with technology. Acts as an interface between society and technology. Obtain related experience through internships or co-op. Take additional courses in area(s) of interest. Develop strong interpersonal and communication skills.

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What can I do with a major in Engineering?

**Environmental**
Design  
Planning  
Operations  
Administration  
Regulations

**EMPLOYERS**
Private industry and businesses involved with air pollution control, industrial hygiene, radiation protection, hazardous waste management, toxic materials control, water supply, storm water and wastewater management, solid waste disposal, public health, and land management  
Private engineering consulting firms  
Construction firms  
Research firms  
Testing laboratories  
International organizations

**STRATEGIES**
Discipline plays vital role in reducing toxicity and pollution of water, ground and air for a better quality of life for all living things. Consider a master's degree for advancement. Foreign language ability beneficial for international work.

**Nuclear**
Environment and Pollution  
Health  
Space Exploration  
Consumer and Industrial Power  
Food Supply  
Transportation  
Water Supply

**EMPLOYERS**
Electric and gas utility companies  
Guided missile and space vehicle companies  
Engineering consulting firms  
Business services including medical industry  
Manufacturers of nuclear power equipment  
Research facilities  
Military services  
Defense manufacturers

**STRATEGIES**
Discipline studies basic components of neutrons, protons, electrons and all matter; deals with inanimate substances.
What can I do with a major in Engineering?

**Engineering Science and Mechanics**
- Engineering Mechanics
- Biomedical Engineering
- Computational Mechanics
- Engineering Materials

**EMPLOYERS**
- Industry
- Manufacturing
- Research organizations

**STRATEGIES**
Interdisciplinary program with broad training in engineering science, mathematics, and physical or biological science.

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